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April 21, 1997

AILEEN A. PISCIOTTA

Mr. Peter Cowhey Chief, International Bureau Federal Communications Bureau 2000 M Street, N.W., Room 830 Washington, D.C. 20554



Re: Ex Parte Submission of Final Analysis Communications Services, Inc., in IB Docket No. 96-220

Dear Mr. Cowhey:

Final Analysis Communication Services, Inc. ("Final Analysis"), by its attorneys, feels obliged to respond by this letter to recent *ex parte* submissions of Leo One USA Corp. ("Leo One") in the above-captioned proceeding to correct certain misrepresentations that have been made.¹ Reliance on correct assumptions and technical information concerning pending applications is critical to the establishment of fair rules for licensing second round non-voice non-geostationary mobile satellite ("NVNG MSS" or "Little Leo") services in the public interest. Final Analysis has previously brought to the Commission's attention that Leo One's analyses are based upon inaccurate assumptions.² However, Leo One's arguments in support of its band plan (the "A/B Band Plan") continue to distort Final Analysis's system proposal and comments on the record to such an extent that Final Analysis is concerned that the Commission may be led to incorrect conclusions in comparing the various proposals that have been put before it.

¹ See Ex Parte Letter from Counsel for Leo One USA Corp., to Acting Secretary, FCC, filed in IB Docket No. 96-220 dated March 28, 1997 ("March 28 Leo One Ex Parte"); Ex Parte Letter from Counsel for Leo One USA Corp., to Chief, International Bureau, in IB Docket No. 96-220, dated April 9, 1997 ("April 9 Leo One Ex Parte").

See letter from Counsel for Final Analysis Communication Services, Inc., to Ruth Milkman, FCC, Re: Leo One March 28 Ex-Parte, filed in IB Docket No. 96-220, April 7, No. of Copies rec'd List ABCDE

Specifically, as explained in more detail below, Leo One attempts to distinguish its proposed system by, among other things, drawing non-existent distinctions between the relative sizes and market plans of the systems proposed by it and Final Analysis. In fact, both applicants propose large systems using essentially equivalent spectrum to provide near real time services, among other applications. Leo One has produced absolutely no evidence that would justify, under any known standard of Commission decision making, giving it any special treatment as a unique system. Additionally, Leo One completely ignores unrefuted technical information now before the Commission that the A/B Band Plan simply does not work. Under that plan, the System B operator either would cause intolerable interference to GE Starsys or would have to accept such onerous operational limitations as to be unable to offer any commercially valuable services. Most importantly, Leo One overlooks the fact that the alternative X/Y/Z Band Plan, recently submitted with a supporting memorandum signed by all second round Little Leo applicants except Leo One³, actually provides Leo One with the identical operational availability that it would have under its own proposed System A.

Leo One would have the Commission believe that the choice is between one near real time system under its proposed A/B Band Plan, or none.⁴ Final Analysis respectfully submits that this is a red herring. As described below, Leo One would have as much or more availability under System Y as under System A. The real choice is not between a Leo One near real time system or none, it is between the licensing of multiple diverse competitors, including at least two with near real time service objectives⁵, each of which will win or lose in the market, or the preselection by the Commission of one unproven proposal.

³ See Memorandum from CTA Commercial Systems, Inc. ("CTA"), E-Sat, Inc. ("E-Sat"), Final Analysis Communications Services, Inc., GE Starsys Global Positioning, Inc. ("GE Starsys"), Orbital Communications Corp. ("ORBCOMM"), and Volunteers in Technical Assistance ("VITA"), to Ruth Milkman, Deputy Chief, International Bureau, filed in IB Docket No. 96-220, dated April 11, 1997 ("Parties' Proposal").

Leo One also attempts to create a false sense of urgency by stating that there is an "immediate" requirement for new near real time service. Due to the phased implementation of NVNG MSS constellations generally, and the fact that Leo One itself will require several years to deploy its full 48 satellite system, implementation of near real time services will not be immediate in any case, even under the best of circumstances. Any and all Little Leo operators must be prepared to build a business base in intermittent services in the mean time. If Leo One believes, as it appears to, that reliance on such services will "destroy the economic viability" of its system, it should be deemed to be unqualified to be an NVNG MSS licensee.

⁵ As described below, both Leo One and Final Analysis propose greater than 90% geographic coverage of CONUS. The differences in their degrees of coverage are not material for the purposes of availability for near real time NVNG MSS services. The more critical determining factor is the outages that will be suffered because of time sharing requirements.

Final Analysis believes that Leo One's tactics reveal that it does not and cannot make technical or public interest arguments in support of its proposed A/B Band Plan. Rather, all of its efforts are aimed at convincing the Commission to protect and help implement the Leo One business plan for exclusive use of the 400 MHz band, the particular exigencies of which remain wholly unexplained. Final Analysis believes that such an approach is unsupported and certainly would not lead to the best way of resolving this proceeding to promote competition in the public interest.

I. THE LEO ONE AND FINAL ANALYSIS SYSTEMS ARE SUBSTANTIALLY SIMILAR.

A. Both Companies Propose Large Systems

At the outset, it is critical to point out that each applicant has a different system design, and may utilize a different number of satellites and even somewhat different channel capacity, to serve essentially the same market. Thus, in comparing the system proposals it is difficult to be more precise than to classify them generally as "large" (20 or more satellites) or "small" (fewer than 20 satellites) systems. Clearly, Leo One and Final Analysis both propose large systems. Moreover, the very fact that, within each category of large and small systems there are several different proposed approaches indicates the difficulty that the Commission would have in choosing one particular technical or business approach over another.

Leo One's repeated claims that it has "vastly different system requirements" from Final Analysis or that the X/Y/Z Band Plan would expand Final Analysis's proposed system, are nonsensical and plainly contradicted by the facts in the record of this proceeding. In its original application, Final Analysis's proposed a near real time system with nine (9) 25 kHz service downlink channels and three (3) 50 kHz feeder downlink channels for a total downlink requirement of 375 kHz. In comparison, Leo One has proposed a near real time system with eight (8) 25 kHz service downlink channels and three (3) 60 kHz feeder downlink channels for a total downlink requirement of 380 kHz.

⁶ See Leo One March 27 Ex Parte at 7; Leo One April 9 Ex Parte at 2-3.

In its Comments, Leo One defined "near real time" as a system which offers gaps in availability of no more than 5 minutes. See, Leo One Comments at 9 n. 18. Now, however, Leo One seems to indicate that it proposes a system with 100% availability. In fact, neither Leo One nor any other NVNG MSS applicant has actually proposed a "real time" system. Consequently, in the best of circumstances, all NVNG MSS operators will have to accept some gaps in availability.

⁸ See Final Analysis Communication Services, Inc., Application, File No. 25-SAT-P/LA-95, filed on November 16, 1994 ("Final Analysis November 1994 Application.)

⁹ See Leo One November 1994 Application, File No. 57-DSS-P/LA-94.

Moreover, both companies requested use of the 137-138 MHz and 400.15-401 MHz bands for their downlinks. Contrary to Leo One's unsupported claim, therefore, the record shows that its system and Final Analysis's system as originally conceived are substantially similar, differing in total downlink requirement by a mere 5 kHz and in coverage by just a few percent.¹⁰

In an early amendment, Final Analysis proposed to reduce the amount of downlink spectrum requested from the nine (9) 25 kHz channels proposed in its original application to nine (9) 15 kHz channels, to meet new requirements to fit within the spectrum available at that time in consideration of ORBCOMM's coordination with NOAA.¹¹ Final Analysis's amendment explicitly states:

These reductions in frequency use are proposed in view of the current scarcity of frequencies for NVNG MSS use. In the event that additional bandwidth is obtained in the World Radiocommunication Conference process, or through other reallocations of frequencies, Final Analysis reserves the right to revert to a frequency plan featuring the full 25 kHz segments originally proposed.¹²

Thus, Final Analysis's amendments reflect only an effort to be realistic about available spectrum, not an intent to downsize its desired constellation. Consequently, any relevant and reasonable comparison is between the systems proposed by Leo One and Final Analysis would conclude that they are essentially the same, requiring the same spectrum.

Both companies will now have to further modify their system designs to accommodate available spectrum, which is less than either company originally designed for, and to operate within whatever band plan the Commission ultimately adopts. In this context, Leo One's argument that the X/Y/Z Band Plan results in an increase in spectrum for Final Analysis, is absurd.

B. Both Companies Propose Near Real Time Service

In their comments on the record, Leo One and Final Analysis have described marketing plans aimed at the same near real time market segment. In considering the prospects for provision of near real time service by Little Leo systems, two different system characteristics should be taken into account. The first is continuous CONUS satellite geographic coverage, which describes the amount of earth surface covered by system satellite footprints at any one time. Both Leo One and Final Analysis originally proposed large satellite constellations to provide more than 90 percent near real time coverage for CONUS.

¹⁰ See Leo One March 27 Ex Parte at 4; Leo One April 9 Ex Parte at 1-2.

¹¹ <u>See</u> Final Analysis November 1994 Application Final Analysis Amendment, File No. 76-SAT-AMEND-95, filed on February 24, 1995 ("Final Analysis February 1995 Amendment").

¹² Final Analysis February 1995 Amendment at 2 n. 1 (emphasis added).

The second feature is satellite availability, which describes the percentage of total time that a user may access the satellite for communications. Leo One tends to blur and confuse these two concepts. In fact, it is availability which is most critical in providing near real time services, but it is also availability which is most directly affected by time sharing obligations. Final Analysis has clearly maintained the view throughout this proceeding that true near real time services will not be possible for any Little Leo operator under the time sharing obligations that the Commission has proposed. However, Leo One has now taken completely out of context Final Analysis's statements in formal pleadings that only 65% availability will be achievable under available spectrum.

Final Analysis believes that all of Leo One's claims that it alone can provide near real time services in competition with ORBCOMM are illusory.¹³ With respect to their plans to provide near real time services, the only difference between Leo One and Final Analysis is that Leo One believes it can ameliorate the 65% availability limitation with a system design that includes frequency "hopping" accomplished with the use of expensive customer terminals. From a technical standpoint, Final Analysis could just as easily pursue the same approach, but from a marketing standpoint does not intend to because such an approach imposes much higher costs on consumers than Final Analysis believes all market segments can bear. In essence, Leo One is asking the Commission to bet everything on the assumption that it alone has a viable market plan. Final Analysis does not believe that it is necessary, or prudent, for the Commission to take such a risk.¹⁴

Moreover, contrary to the implications in Leo One's April 9 letter, Final Analysis has never said that it intends to implement a system only for the 65% availability possible under the Commission's proposal. Quite the opposite; Final Analysis has consistently and repeatedly said that it could implement a "commercially viable" system with less than near real time availability on an interim basis, but that such a system would not be fully competitive with first round licensees. Final Analysis further consistently has stressed that it intends to market near real time services and that the Commission should ensure that additional spectrum is allocated so that those Little Leo operators intending to market near real time services can do so. Thus, any implication that Final Analysis would be content with 65% availability is completely false, and cannot be relied upon as any measure of "different business requirements and service offerings" between the two companies, as Leo One would have the Commission believe.

¹³ It is also worth noting that, while Leo One characterizes its own approach as the one that best promotes competition in Little Leo services, it has sought consistently and vigorously, throughout the entire course of this proceeding to eliminate all possible competition from other Little Leo applicants.

While Leo One considers Final Analysis's decision <u>not</u> to frequency hop to be an indication of a less efficient use of this spectrum, Final Analysis argues the exact opposite: that Leo One is pursuing an imprudent business plan that may ultimately fail in very cost sensitive market segments and that the Commission would be wasting valuable spectrum to allocate it based upon marketing approaches appropriate only for non-cost sensitive market segments.

C. Fungible Systems are the Best Approach

Although both Final Analysis and Leo One propose large, near real time systems, the specific proposed technical approaches are different. As stated many times in this proceeding, Little Leo systems are new and untried. At this point, without actual market experience, no one approach necessarily can be deemed the best. Entrepreneurs must be allowed to test their technical and service approaches in the actual marketplace.

Consequently, a licensing approach which identifies two large fungible systems is most appropriate. It does not prejudge any particular technical plan or marketing approach, but gives two companies with essentially equivalent proposed systems equal opportunities to serve the market. This fungibility approach also is in the public interest because it obviates the need for a time-consuming and costly comparative assessment of the details of each system as defined in the various competing applications. The particular parameters of each application are not dispositive in a fungible band plan because all system assignments are deemed to be equally suitable.

II. LEO ONE'S "SYSTEM B" WOULD SEVERELY HANDICAP FINAL ANALYSIS AND OTHER LITTLE LEO OPERATORS.

Leo One is also wrong in its claims that the A/B Band Plan would support all Little Leo spectrum requirements. Leo One asserts that Final Analysis's system can be "successfully coordinated" in the 137 MHz band and that Leo One's A/B Band Plan does not pose any time-sharing limitations upon Final Analysis's system. Leo One offhandedly disregards Final Analysis's arguments as to why it cannot put its entire system in the 137 MHz band, and ignores plain evidence that System B would impose significant degradation on operations of other users.

A. System B Unnecessarily Disadvantages Final Analysis

Leo One erroneously maintains that, purely on the basis of frequency availability, System B actually more closely meets Final Analysis's requirements than either System X or Y. 16 Leo One's arguments are theoretical and oversimplified. In actual fact, the most important reason that Final Analysis finds System B unacceptable is that, as described below, coordination with GE Starsys would require operation at power levels and with outages that

¹⁵ See Leo One April 9 Ex Parte at 4-5.

¹⁶ Leo One again spends inordinate energy to demonstrate that System B is good for Final Analysis. In the April 9 letter, Leo One also argues that, because of NOAA migration plans, in some bands and in some time periods Final Analysis could operate in the 137-138 MHz band without time sharing requirements, greatly increasing its availability. Leo One mysteriously has never even addressed the obvious question as to why, on the basis of availability, its own system could not be better accommodated in System B.

would preclude implementation of commercially viable services.¹⁷ Moreover, Final Analysis's technical assessments lead to the conclusion that operation of an entire large constellation within System B would require very difficult coordination with other users of the band. Also, as Final Analysis has explained in its Comments in this proceeding, access to the 400 MHz band is critical because of the investment already made in system design.¹⁸

Leo One would have the Commission completely discount Final Analysis's investment in design and testing for operation in the 400 MHz band, and would have the Commission misapply the policy that experimental licensees and recipients of 319(d) waivers make investments at their own peril. As explained in Final Analysis's Comments, such policies are aimed at preventing bootstrapping into a license. That is not at issue here. What is at issue, presuming a license may be granted to Final Analysis, is the specific frequencies that will be assigned. There is a world of difference in these two concepts. Final Analysis agrees that it should not necessarily be granted a commercial license just because it has made investments under an experimental license. However, in assigning frequencies to Final Analysis under a commercial license, it is nonsensical to ignore the actual investment in design and development that has been made.²⁰

Final Analysis...does not argue here that its investment in the experimental program should compel the Commission to grant it a license. Nevertheless, assuming that the Commission otherwise finds Final Analysis qualified to receive a second round Little Leo license, the Commission reasonably may consider operational parameters, development and design of Final Analysis's experimental satellite system in determining what frequency assignments for Little Leo systems would be in the public interest. Indeed the Commission has recognized the public interest benefits of initial experimental programs in formulating permanent spectrum licensing policies and rules....See, e.g., Domsat II, 35 F.C.C. 2d at 844-847; Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, 10 FCC Rcd 4695 at ¶¶ 3-4 (1995).

Contrary to Leo One's statement that "to this day [Final Analysis] has never provided any technical analysis explaining why it cannot operate in the 137 MHz band," such evidence was clearly and unambiguously provided in a presentation to the Commission staff on March 17 demonstrating the coordination requirements and impact on the GE Starsys link margin of a large system operating both service and feeder links in the 137 MHz band as required for System B. In fact, Leo One itself acknowledges these problems in its April 9 letter, note 8 and Appendix A, note 2.

¹⁸ See Final Analysis, Reply Comments in IB Docket No. 96-220, filed January 13, 1997, at 36-37.

¹⁹In its Reply Comments at 36, note 59, Final Analysis clearly stated:

²⁰ It is noteworthy that, as of this date, Final Analysis has actually completed construction of a satellite for launch and has put in place the ground system necessary to (continued...)

Moreover, Leo One has no better argument for its own claim to the 400 MHz band. The April 9 letter offers no explanation as to why Leo One should get special treatment other than vague and unsubstantiated statements to the effect that it has "invested considerable expense and time to adapt its original design to operate in the 400 MHz band," and that it is not as "flexible" as other applicants and any required technical modifications would have "much greater impact" on Leo One than on other applicants. Leo One does not explain why it should benefit exclusively from such prior investments and Final Analysis should not. Nonetheless, as an accommodation to Leo One's arguments, the X/Y/Z Band Plan proposes the sharing of the 400 MHz band for service and feeder links.²¹

B. System B Would Result in Unacceptable Interference to Other Users

Leo One asserts that the only difference between the A/B and X/Y/Z Band Plans is how Final Analysis and Leo One are treated, and that all other applicants fare equally well. However, the A/B Band Plan cannot accommodate another large system in the 137-138 MHz band without causing serious harm to the incumbent operations of GE Starsys and ORBCOMM and compromising the proposed operations of E-Sat and CTA. The absence of coordination and discussion with the existing users of the band makes Leo One's A/B Band Plan useless. GE Starsys also has stated on numerous occasions that its link margin is seriously constrained by METSAT and ORBCOMM system operations in the 137-138 MHz band.²² GE Starsys's link margin cannot tolerate additional service links operating in the inner NOAA channels of the 137-138 MHz band or any type of links that operate in the main beam of GE Starsys's antenna. Leo One's April 9 letter does not address this issue.

As made clear in Final Analysis's presentation to the Commission staff on March 17, 1997²³, the GE Starsys link margin remaining after coordination with NOAA and ORBCOMM is about 0.7 dB. However, an additional FDMA system operating a single service link in the upper NOAA TIP channel would use 1.26 dB of the GE Starsys link

²⁰(...continued) operate its entire constellation. Leo One has nowhere near that level of demonstrated investment in this technology and has placed absolutely no evidence in the record that it has actually made any such investment or achieved such technology development.

²¹ Final Analysis also acknowledges Leo One's arguments that it has expended "significant financial and manpower investment" in developing arguments as to why Final Analysis should be assigned to System B operating in the 137-138 MHz band. This was not an altruistic investment, as it was meant only to advance Leo One position for its own benefit. Moreover, Leo One's "investment" would have been much less if Leo One had been willing to coordinate its technical studies with the other applicants. However, to date, Leo One has insisted on conducting its studies in isolation, often on the basis of misplaced or incorrect assumptions, which then require significant revision.

²² See, e.g., GE Starsys, Ex Parte, filed in IB Docket No. 96-220, April 3, 1997.

²³ See Final Analysis, Ex Parte, filed in IB Docket No. 96-220, March 17, 1997, at 11.

margin when in the GE Starsys antenna main beam. Thus, the link margin degradation to GE Starsys from System B would be greater than the amount available. Consequently, coordination with GE Starsys would require the System B operator to reduce power significantly or to turn off entirely when in the main beam of the GE Starsys antenna gateway on a worldwide basis.

Each service link added to the system would further contribute to the degradation of the GE Starsys link margin. Application of the Leo One A/B Band Plan in reality would result in even worse link margin degradation due to the inclusion of an additional spread spectrum system (E-Sat) and small FDMA system (CTA) in the same 137-138 MHz band. Leo One also neglects to mention the cumulative negative impact of the CTA and E-Sat operations on GE Starsys's link margin.²⁴

In contrast, GE Starsys, ORBCOMM, E-Sat, CTA and VITA and Final Analysis have carefully crafted the X/Y/Z Band Plan to accommodate the link margin requirements of GE Starsys. Therefore, the X/Y/Z Band Plan does not present the serious coordination problems with GE Starsys that are presented by the Leo One A/B Band Plan.

III. THE NVNG MSS INDUSTRY BAND PLAN TREATS LEO ONE IN THE SAME MANNER AS ITS A/B BAND PLAN PROPOSAL.

Leo One complains that the X/Y/Z Band Plan would deprive it of its spectrum requirements and that only the Leo One A/B Band Proposal can meet those needs. However, a realistic assessment of the two band plans shows that, specifically with respect to availability, Leo One's concerns are unfounded. In fact, availability is exactly the same for Leo One under System A as under System Y.

As described above, Leo One inaccurately represents that System A would provide for 100% availability. Leo One may achieve 100% continuous geographic coverage of CONUS with its 48 satellite system under either band plan. However, geographic coverage is not determinative of availability, especially under time sharing arrangements. A fundamental condition on Leo One's proposed operations, *i.e.* the requirement of time-sharing with the DMSP and VITA operations, is present under either band plan and necessarily limits availability to some extent. The only relevant question is whether those limits are the same or better under one plan or the other.

With respect to System A, Leo One estimates outages due to time sharing with DMSP to be approximately 32 percent (when two DMPS satellites are in view).²⁶ This yields an

²⁴ Cf. Leo One April 9 Ex Parte at 4-5.

²⁵ See Leo One April 9 Ex Parte at 3, 5.

²⁶ See Leo One Comments, filed in IB Docket No. 96-220, December 26, 1996 at Appendix E, p.20, Table 2.

availability of 68 percent. To improve availability, Leo One assumes that it will be able to "hop" to VITA's frequency band when both DMSP bands are occupied by government satellites. However, there is a possibility that the VITA satellite would be in the same footprint as the two DMSP satellites. This means that there would be no alternative frequency band to "hop to" under such circumstances, and that System A could provide, at best about 91% availability.

With respect to Leo One's proposed System B, the only available spectrum for time-sharing in the 137-138 MHz band are the NOAA frequencies. Therefore, coverage of System B (according to Leo One's own calculations) is 68 percent (based upon a 32 percent outage) for zero degree elevation.²⁷

Similarly to the A/B Band Plan, the X/Y/Z Band Plan would provide Leo One with access to both ends of the DMSP spectrum and the VITA spectrum, if Leo One opts for System Y. This would enable Leo One to perform the same frequency hopping maneuver that it plans in System A. Accordingly, with respect to availability, System Y presents no less coverage and no more outage than is present under System A.²⁸ In fact, because System Y would also utilize some spectrum in the 137-138 MHz for feeder links, coverage outages would be reduced if systems are designed to take advantage of this additional spectrum.²⁹

IV. ONLY THE X/Y/Z BAND PLAN RESOLVES OUTSTANDING ADMINISTRATIVE ISSUES

Leo One's proposal does not resolve the possibility of mutual exclusivity. Thus, by Leo One's admission, implementation of the plan would still involve some administrative process to determine specific assignments. Interestingly, in its April 9 Ex Parte Leo One inexplicably, for the first time, abandons the approach it has advocated for so long which would require the use of auctions as the ultimate decision-making tool.³⁰ Instead, Leo One now advocates the use of some vaguely defined comparative standard based upon criteria used in the fixed satellite service for assignment of orbital locations. Leo One asserts that this will result in "equitable" assignments.

²⁷ See id. at Appendix E, p.16, Table 1.

²⁸ Throughput could be more limited under the System Y plan for the DMSP bands, although throughput would be the same in teh VITA bands under either System A or System Y.

²⁹ Alternatively, if Leo One does not want to utilize spectrum in the 137-138 MHz band, it could still use its proposed system design to operate within System Y using only spectrum in the 400 MHz band.

³⁰ The use of auctions otherwise has received no support in this proceeding and, in fact, has been virtually unanimously opposed by all other commenters.

In its Comments, Final Analysis itself originally recommended the use of public interest criteria to make specific assignments. Under the criteria promoted by Final Analysis, which were tailored to suit NVNG MSS systems rather than non-analogous fixed satellite systems, the Commission would assign System A to Final Analysis. Thus, it can now be foreseen that the approach promoted by Leo One would not avoid the necessity of resolving mutually exclusive applications and may lead to contested results and more protracted proceedings, further delaying final licensing of Little Leo systems.

Especially in light of this, the X/Y/Z Band Plan is far superior from an administrative standpoint. All applicants are accommodated in separate bands. In particular, the creation of two large fungible systems permits Final Analysis to be satisfied with either System X or Y, completely avoiding any potential mutual exclusivity between Final Analysis and Leo One. Only this approach will eliminate the need to use either comparative criteria or auctions to resolve competing applications.

V. CONCLUSION

The Commission has before it two very different proposals. One is the A/B Band Plan, now espoused only by Leo One and justified only by what that company believes it needs to satisfy its own interests. Approval of this plan not only would require a tremendous leap of faith that the marketing plan of this company, which is disputed by others, would best serve the public interest. It also would require the Commission to ignore the severe technical handicaps and coordination burdens the plan would place on other companies.

The other proposal, the X/Y/Z Band Plan, endorsed by six of the seven second round applicants, including the first round licensees, reflects intensive technical analysis, creative problem solving, negotiation and compromise on the part of all participants for the good of the industry as a whole. These six companies have worked extremely hard to arrive at a solution which satisfies their immediate needs, as well as those of Leo One, and sets the stage for implementation of several fully competitive systems in the future. Moreover, the X/Y/Z Band Plan represents the hard-earned input from the real-world experience in research, design, operation and marketing of Little Leo satellite systems by CTA, E-Sat, Final Analysis, GE Starsys and ORBCOMM³¹, unlike the A/B Band Plan which is premised on Leo One's purely speculative and "paper" assumptions. We urge the Commission to conclude that only the X/Y/Z Band Plan will truly safeguard the public interest by allowing consumers to pick the winners and bringing Little Leo services of all kinds to the market as swiftly as possible.

³¹ For example, CTA is an experienced satellite manufacturer and thoroughly understands hardware development issues for Little Leo satellites; E-Sat currently serves customers for utility monitoring using the ARGOS system; Final Analysis, with a staff with more than 30 years of aerospace and telecommunications experience, has already designed, built and launched an experimental Little Leo satellite and has implemented the ground system necessary to control an entire constellation; GE Starsys has tested Little Leo applications using the ARGOS system; and ORBCOMM has designed, built, launched and operated Little Leo satellites.

We would be more than happy to further clarify any of the technical issues discussed in this letter.

Sincerely yours,

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